

Amendments to the Specification

Please add the following paragraph after paragraph 6 on page 7:

FIG. 13 is a schematic diagram illustrating an example of a spectrometer.

Please amend the first paragraph of page 20 as follows:

In another embodiment remote monitoring of the flame event using a fast scanning miniature spectrometer is performed. FIG. 13 is a schematic diagram illustrating an example of a spectrometer 100. This embodiment uses fiber optics to locate the spectrometer 100 to an environment, which is conducive to its operating limits. The basic principle of operation would be as follows: Light gathered by the view port attached to the exhaust plenum and transmitted by the fiber optic cable to a fiber optic connection 102, enters the spectrometer 100 through a fixed aperture 103 and optical filter 104. The light energy then strikes a collimating mirror 105 and is directed at the diffraction grating 106. The light is refracted by the grating 106 and directed toward a focusing mirror 107. The diffracted light strikes the focusing mirror 107 where it is reflected and focused onto a detector array 109. In front of the detector array 109 is a lens 108, which concentrates light onto the individual detectors 109. There is also an order sorting filter 110 known in the art to limit the effect of second and third order wavelength harmonics. Finally, each detector element (pixel) responds to the individual wavelength of light that strikes it. The signals are then fed into a microprocessor, which interprets the various signal strengths and produces information relative to the intensity of the individual wavelengths of light as received by the detector array. This information

can then be used to determine the spectral nature of the flame condition being monitored. This sensor technology as produced by Ocean Optics Inc., Dunedin, FL.